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ABSTRACT

The statewide survey examined whether there were difference (1) in the drinking/driving attitudes and self-reported behavior of high school students, (2) between those defined as "alcohol involved" and the "non-involved", and (3) between the Wichita youth compared to the remainder of the youth from throughout Kansas. Data were collected from 1,676 high school students during the 1974 spring semester. Responses were analyzed for differences between those who had consumed alcohol within the last month (alcohol involved) and those who had never or within the last month consumed alcohol (non-involved). Data were analyzed using non-parametric statistics; the .05 significance level was used to specify significant statistical findings. The characteristics of sex, age, family income, race, and school class were examined for the Wichita and the state youth, and alcohol involved and non-involved youth. Findings included: 63% of the state sample was alcohol involved as compared to 54% of the Wichita sample; although only about 13% of each sub-sample was old enough to legally purchase alcohol, 45% of the Wichita sample and 52% of the state sample below 18 years of age were alcohol involved; alcohol involvement tended to increase with grade level and family income in both samples; 24% of the Kansas sample and 10% of the Wichita sample did most of their drinking while driving around; and females in all classifications were more willing to drive after becoming drunk at a party. (NQ)

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Rural-Urban Differences in Drinking Driving Behavior; Attitudes and Perceptions of Kansas Youth

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Introduction

Social scientists are always interested in establishing social indicators that help in either the prediction or explanation of social behaviors.[1] Recent data collected from Kansas youth have some possible clues to coming or perhaps existing social problems of alcohol consumption and automobile driving. Certainly, data indicate some changes in norms relative to consumption patterns, driving after drinking alcohol, evaluation of their driving ability after drinking, and sex related differences in allowing someone else to drive their car after drinking too much.

The major problem examined in this paper is whether there are differences in attitudes and self-reported behavior of high school students relative to drinking alcohol and then driving an automobile. Further, the examination is extended to see if there were differences between those defined as "alcohol-involved" versus the "non-involved",* and whether there were differences between the Wichita youth compared to the remainder of the youth from throughout the state.

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*This definition was used to coincide with national data developed by the Department of Transportation through Grey Advertising Company, Report: DOT HS-801 401; COMMUNICATIONS STRATEGIES ON ALCOHOL AND HIGHWAY SAFETY, Volume II - High School Youth, February, 1975. Document is available to the public through the National Technical Information Service, Springfield, Virginia 22151.

METHODS

The Sample

The respondents to the Kansas youth survey constitute a proportional random sample of state school youth. The basic sampling frame was based on the eleven designated multi-county regions of Kansas. Proportional area weighting was made to avoid an over-weighting of any region of the state.[2] The population percentage for each area was multiplied by 2,000 (the upper limit of the maximum sample size sought) to obtain the appropriate sample size for each region. Actual region totals and the school class standing of the respondents are shown in Table 1. Hence, the sample is a randomly selected group of high school respondents based on relative population density. The sample of 1676 usable cases, resulted from inability to obtain permission to interview in two schools. The data were collected during spring Semester 1974.

Responses were then alalyzed for differences between those who had had alcohol to drink within the last thirty days (alcohol involved) and those who had not (non-involved) Those defined as non-involved included those who had never drunk alcohol as well as those defined as infrequent drinkers.[3] The actual number of cases presented in each table varies due to non-responses to that question.

The survey instrument was a modified version of the youth survey questionnaire developed by the Phoenix Alcohol Safety Action Project.[4] Only selected items are presented in this paper, but the report is available from the author upon request.

TABLE 1

NUMBER AND DISTRIBUTION OF SURVEY RESPONDENTS
(BY REGION AND GRADE LEVEL)

Region	Freshmen	Sophomores	Juniors	Seniors	Region Total Number	Sample Percentage
01	123	136	142	161	562	33.5
02	0	44	44	46	132	7.9
03	13	22	14	21	70	4.2
04 Wichita	134	165	134	127	560	33.4
05	18	19	17	16	70	4.2
06	9	11	13	0	33	2.0
07	24	16	17	17	74	4.4
08	9	9	9	10	37	2.2
09	16	14	11	4	45	2.7
10	22	25	20	26	93	5.5
Total	368	461	419	428	1676	100.0
	22%	27.5%	25%	25.5%	100%	

Analysis

Data were analyzed by use of non-parametric statistics. For the most part the chi-square and some nomographs, a visual difference proportions tests, have been used.[5] The statistic and designated levels of significance are presented with supporting tables when results are presented. The .05 significance level has been used to specify significant statistical findings.

RESULTS

The results of this survey are presented for Wichita yough and Kansas youth (Wichita youth omitted). The results are further subclassified by the operational definition of drinking status of the respondents. As a reminder the "alcohol involved" youth were those who reported they had consumed alcohol within the last month. "Non-Alcohol Involved" youth included respondents who reported never consuming alcohol or no consumption within the last month prior to the study.

Socio-Demographic Characteristics

The characteristics of sex, age, income, race, and school class are examined in this section to see if any differences or trends existed between Wichita and the remainder of the state or between those classified as alcohol involved versus those who were not.

Sex

This cross tabulation between sex and drinker classification for Wichita and the remainder of the state is presented in Table 2.

TABLE 2

SEX OF RESPONDENTS BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
Sex	#	%	Σ	#	%		#	%	Σ	#	%	Σ
Male	149	53	227	78	33		344	52	501	157	40	728
Female	134	47	291	157	67		314	48	549	235	60	840
Totals	283	100	518	235	100		658	100	1050	392	100	1568
	55%			45%			63%			37%		
			33%						67%			

$x^2 = 1.96$ with 1 d.f., N.S.

The data presented indicate no difference in the percentage of males and females classified as alcohol involved for the Wichita-Kansas comparisons. The 53 percent male Wichita sample is matched by the 52 percent Kansas sample. On the other hand there are sex differences in percentages among the non-alcohol involved. Only 33 percent of the non-alcohol involved respondents in Wichita were male and 40 percent of the non-alcohol involved Kansas sample were male. Although a greater percentage of females constitute the non-alcohol group within each sample, the difference between males and females was not statistically significant.

The totals for Wichita and Kansas show that a greater proportion of Kansas respondents, both male and female, were alcohol involved compared to Wichita respondents (55%-63%), but there were no significant differences in the sex distribution of the sample.

Age

Examination of the age distribution of the respondents indicates little difference between the Wichita and Kansas respondents and for drinker classification. Support for this statement is shown in Table 3.

TABLE 3

AGE DISTRIBUTION OF RESPONDENTS BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita					Kansas					
	Alcohol Involved			Non-Alcohol Involved		Alcohol Involved			Non-Alcohol Involved		
Age	#	%	Σ	#	%	#	%	Σ	#	%	Σ
Under 14	12	4	34	22	9	27	4	71	44	11	105
15	73	26	142	69	29	137	21	254	117	30	396
16	80	28	151	71	30	186	28	294	108	28	445
17	70	25	124	54	23	195	30	279	84	21	403
18+	47	17	67	20	9	112	17	152	40	100	219
Total	282	100	518	236	100	657	100	1050	393	100	1568
	54%			46%		63%			37%		
			33%					67%			

$x^2 = 2.92$ with 4 d.f., N.S.

An interesting point is the large number of youth below 18 years of age in the alcohol involved classification for both sample groups. Only 13 percent of the Wichita sample and 14 percent of the Kansas sample were legally old enough to purchase beer in the state; yet, 45

percent of the Wichita sample and 52 percent of the Kansas sample report alcohol involvement prior to the time it is legal for them to purchase alcohol. Further, the incidence of alcohol involvement increases with age for both sample groups; by age of 16, students were more likely to report alcohol involvement; at age 18 or older, almost twice as many students reported alcohol involvement. However, the chi square statistic indicates there was no significant difference in the two groups based on age of the students.

Family Income

Income data are similar according to alcohol involvement for both sample groups below the $15,000 level. Above $15,000 almost half were alcohol involved in the Wichita sample but represented about one third of the Kansas sample. Alcohol involvement was almost twice as likely above the $25,000 income level for the Wichita sample. However, independent of this trend of increasing alcohol involvement with increasing income level for the Wichita sample, the total percentage of alcohol involved respondents is less than for out-state Kansas. The figures and statistics can be seen in Table 4. There is a significant difference in family income by residence found in these data.

TABLE 4

FAMILY INCOME BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
Family Income	#	%	Σ	#	%	Σ	#	%	Σ	#	%	Σ
$2,999 or less	5	2	14	9	4		22	3	40	18	5	54
$3,000-$4,999	10	4	23	23	11		61	10	95	34	9	118
$5,000-$9,999	38	15	84	46	22		140	22	231	91	24	315
$10,000-$14,999	82	32	146	64	31		208	33	323	115	30	469
$15,000-$24,000	75	30	124	49	23		139	22	223	84	22	347
$25,000 or more	42	17	61	19	9		64	10	100	36	10	161
Total	252	100	452	210	100		634	100	1012	378	100	1464
	55%			45%			63%			37%		
			31%						69%			

X^2 = 14.7 with 6 d.f., > .05 level.

Racial Background

Some common stereotypical notions about ethnic and racial characteristics and drinking did not hold in the data collected in this study. Data presented in Table 5 illustrate this point.

TABLE 5

RACIAL BACKGROUND BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita					Kansas					
	Alcohol Involved			Non-Alcohol Involved		Alcohol Involved			Non-Alcohol Involved		
Race	#	%	Σ	#	%	#	%	Σ	#	%	Σ
Am. Indian	6	2	13	7	3	29	4	40	11	3	53
Black	16	6	48	32	14	12	2	19	7	2	67
Mexican-Am.	4	1	9	5	2	12	2	20	8	2	29
White	238	87	411	173	76	574	87	923	349	87	1334
Other	10	4	22	12	5	34	5	59	25	6	81
Total	274	100	503	299	100	661	100	1061	400	100	1564
	55%			45%		62%			38%		
			32%					68%			

$x^2 = 49.12$ with 4 d.f., < ,001 level.

There appears to be relatively little relationship between race and involvement with alcohol in each sample. The Kansas sample had almost identical proportions for all classifications, but there were two marked differences in the Wichita sample. There were 11 percent more whites classified as alcohol involved than non-alcohol involved and there were 8 percent fewer blacks classified as involved than classified non-involved. Hence, notions of adult patterns of drinking for some groups did not hold in these data. As with the income variable, the Wichita sample showed greater differences for alcohol involvement according to racial background. Alcohol involvement appears to be relatively uneffected by these variables in the Kansas sample.

There was a highly significant relationship in the computed chi square. Most of the variance can be attributed to the over representation of blacks in the Wichita sample. This difference of course reflects the actual distribution of black residents in the state, most are urban residents.

Class Standing

Class standing correlates highly with age, which has already been presented, but the class data are presented independently in Table 6.

Again the increase in alcohol involvement is noted as class standing increases, especially the senior class in both samples, and non-involvement with alcohol decreases. However, there seems to be a bit more variation in alcohol involvement according to class standing for the Kansas sample, whereas the proportion of persons reporting alcohol involvement for each class level seems more constant for the Wichita

TABLE 6

CLASS STANDING BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
Class Standing	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
	#	%	Σ	#	%	Σ	#	%	Σ	#	%	Σ
Freshman	63	22	130	67	28		108	16	226	118	29	356
Sophomore	78	27	149	71	30		180	26	288	108	26	437
Junior	63	22	120	57	24		182	27	284	102	25	404
Senior	81	29	126	45	18		211	31	291	80	20	417
Total	285	100	525	240	100		681	100	1098	408	100	1614
	54%			46%			63%			37%		
			33%						67%			

$X^2 = 5.32$ with 3 d.f., N.S.

sample. There was no significant difference in the sample distribution based on sampling procedures. Of course this finding of non significance should be expected if the sampling procedure is appropriate.

Drinking and Driving Behavior

Questions linking drinking and driving have been considered in the following section. These included questions about driving after drinking, amount willing to drink and still drive, perceptions of driving ability after drinking, concerns about driving while intoxicated, deterrents to driving while intoxicated and probability decisions about driving after becoming drunk at a party.

Driving After Drinking

Slightly over one-third of both samples said they "never" drive after drinking but there were marked differences between the alcohol involved and the non-alcohol involved respondents. These data along with the remaining responses are shown in Table 7.

It can be seen that the alcohol involved were more willing to drive in an emergency and have more confidence in their driving ability. The "no difference" responses really say, "It makes no difference how much I drink, I always drive anyhow". Clearly there were significant differences between those classified as alcohol involved and those classified as non-involved. Also there were significant differences between the Wichita and the Kansas group, the patterns and trends

TABLE 7

DRIVING AFTER DRINKING BY SAMPLE GROUP
AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
Drive After Drinking	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
	#	%	Σ	#	%	Σ	#	%	Σ	#	%	Σ
Never	73	26	172	99	44		188	28	408	220	56	580
Emergency Only	50	18	59	9	15		103	15	131	28	7	190
Drive "but not when drunk"	61	22	66	5	2		243	36	258	15	4	324
No Difference	16	6	17	1	0		55	8	59	4	1	76
Don't Drive	77	18	187	110	49		83	14	206	123	32	393
Total	277	100	501	224	100		672	100	1062	390	100	1563
	55%			45%			63%			37%		
			32%						68%			

X^2 = 11.68 with 3 d.f., > .01 level. N = 1170

in driving after drinking were quite similar with the exception that a greater percentage of the alcohol involved Kansas sample reported "driving often after drinking but never when drunk", compared to the Wichita group. The outstate group clearly drive after drinking in higher percentages than the Wichita group. The difference was significant at the .01 level for those who drive.

Driving While Intoxicated

To check driving experiences after drinking too much, the students were asked how many times they had driven when they "were really pretty drunk?" Again the alcohol involved and non-alcohol involved classifications hold as the major differences. Greater percentages of the alcohol involved in both sample groups have driven more frequently when intoxicated. (See data in Table 8).

TABLE 8

FREQUENCY OF DRIVING WHILE INTOXICATED BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
Times	#	%	Σ	#	%	Σ	#	%	Σ	#	%	Σ
Never	154	56	314	160	69		349	52	676	327	81	990
1 - 2	61	22	69	8	3		178	26	192	14	4	261
3 - 5	11	4	11	0	0		43	6	46	3	1	57
6 - 10	7	3	7	0	0		18	3	19	1	0	26
Over 10	9	3	9	0	0		47	7	47	0	0	56
Don't Drive	34	12	98	64	28		38	6	95	57	14	192
Total	276	100	508	232	100		673	100	1075	402	100	1583
	54%			46%			63%			37%		
			32%						68%			

X^2 = 12.13 with 4 d.f., > .02 level. N = 1390.

The data indicate a slight tendency for more frequent drunk driving by the Kansas alcohol involved group than the Wichita group. The difference was substantiated by the .02 level significant chi square computed.

Amount Willing to Drink and Drive

"How much is the most you will drink and continue to drive?" was asked to ascertain the students' judgements regarding how much alcohol is perceived to be required to reduce driving ability after drinking.

The data again show the willingness of greater proportions of the alcohol involved respondents, in both samples, to drive after drinking larger amounts of alcohol. The response pattern was quite similar for the alcohol involved segment of each sample group, but there was no significant difference between the Wichita and the outstate sample. The trend is clearly related to the definition of alcohol involved students, not to residence by sample.

TABLE 9

AMOUNT WILLING TO DRINK AND DRIVE BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita					Kansas					
	Alcohol Involved			Non-Alcohol Involved		Alcohol Involved			Non-Alcohol Involved		
Drinks	#	%	Σ	#	%	#	%	Σ	#	%	Σ
1 - 0	57	21	160	103	45	146	22	384	238	60	544
2	38	14	48	10	4	81	12	108	27	7	156
3	29	10	38	9	4	75	11	94	19	5	132
4	22	8	25	3	1	54	8	62	8	2	87
5	18	7	20	2	1	61	9	63	2	.5	83
6	16	6	16	0	0	69	10	71	2	.5	87
7 - 9	16	6	20	4	1	46	6	48	2	.5	68
10 or more	17	6	17	0	0	66	10	71	5	1	88
Don't Drive	62	22	162	100	43	72	11	165	93	23	327
Total	275 54%	100	506	231 45%	100	670 63%	100	1062	396 37%	100	1572
			32%					68%			

x^2 = 8.25 with 7 d.f., N.S. N = 1245

Driving Ability When Drunk

The students were asked to rate their driving ability while under the influence of alcohol compared to when they had not been drinking. Trends were similar in both sample groups but major differences in perception can be seen between the alcohol involved and the non-alcohol involved. Data presented in Table 10 indicate that a perception exists that alcohol improved or at least does not negatively influence

TABLE 10

DRIVING ABILITY WHEN DRUNK BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
Ability	#	%	Σ	#	%	Σ	#	%	Σ	#	%	Σ
Much better	10	4	11	1	0	1	20	3	26	6	2	37
Little better	15	5	15	0	0	0	28	4	30	2	0	45
Same	51	18	59	7	3	7	172	26	196	24	6	254
Little worse	76	27	90	14	6	14	193	29	209	16	4	299
Much worse	18	6	19	1	0	1	42	6	49	7	2	68
Never drink and drive	33	12	138	105	46	138	138	21	381	243	62	519
Don't Drive	74	18	177	103	45	103	76	11	170	94	24	347
Total	277	100	508	231	100	231	669	100	1061	392	100	1569
	54%			46%			63%			37%		
			32%						68%			

$X^2 = 5.09$ with 5 d.f., N.S. n = 1222

driving ability is held primarily by the alcohol involved groups and not shared by the non-alcohol involved group. The latter group, of course, has had much less direct personal experience involving driving after drinking. Most of the non-involved don't drive or do not drive at all after drinking (Wichita, 91%; Kansas, 86%). It seems quite likely, however, that most students responded to this question from a general attitude rather than personal experience. Only 40 percent of the Wichita alcohol involved sample and 32 percent of the Kansas sample reported that they did not drive or did not drive after drinking for this question. Other data, showing responses to the direct question regarding drinking after driving, indicated that 54 percent of the Wichita alcohol involved group and 41 percent of the Kansas group reported that they did not drive or did not drive after drinking.

In general, few respondents felt that alcohol improved their driving ability but on the other hand, only a small percentage felt that alcohol made their driving ability much worse, independent of classification regarding alcohol involvement. Most respondents felt that alcohol only made their driving ability a "little worse" or had no effect. This perception was not significantly related to sample place

of residence as evidenced by the non-significant chi square.

Concern For Consequences of Driving While Intoxicated

The majority of respondents in each sample group, indeperdent of alcohol involvement, reported that the consequence of driving while intoxicated that concerned them most was possible injury to others. This concern was reported by a larger proportion of the Kansas sample than the Wichita sample. The percentage figure for this response was larger for the alcohol involved than non-alcohol involved in each sample group, but this comparison is not totally accurate due to the relatively larger percentage of non-alcohol involved respondents who reported that they don't drive. (See data in Table 11.)

TABLE 11

CONCERN FOR CONSEQUENCES OF DRIVING WHILE INTOXICATED BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita						Kansas					
	Alcohol Involved			Non-Alcohol Involved			Alcohol Involved			Non-Alcohol Involved		
Concern	#	%	Σ	#	%	Σ	#	%	Σ	#	%	Σ
Legal Problems	31	11	41	10	4		63	9	88	25	6	129
Wreck Insurance	10	4	13	3	1		23	3	33	10	3	46
Injury to Self	14	5	23	9	4		32	5	54	22	6	77
Injury to Others	148	53	239	91	39		438	65	662	224	56	901
Other	10	3	23	13	6		43	6	70	27	7	93
Don't Drive	63	22	164	101	43		53	8	140	87	22	304
Multiple Response	5	2	12	7	3		22	4	25	3	0	37
Total	281	100	515	234	100		674	100	1072	398	100	1587
	55%			45%			63%			37%		
			32%						68%			

$X^2 = 2.09$ with 4 d.f., N.S. N = 1246

Of those who drive concern for injury to others far outweighed concern over self-injury and all other concerns combined. The consequence of legal problems was a distant second concern for the alcohol involved in both groups. The chi square test for sample differences between the Wichita and the outstate sample produced a non significant result. Most of the variance in this variable can be attributed to alcohol involvement not place of residence.

Students also were asked what would keep them from drinking too much if they were at a party and knew they had to drive home. A summary table has not been presented since responses were quite similar to the pattern in Table 11. The majority of respondents indicated "fear of accident" as the major deterrent factor. Another factor, a "disapproving date" was noted as a deterrent by 12 percent of the Wichita sample and by 19 percent of the Kansas sample. Police and friends had relatively little influence (4% friends, 4% police, in Wichita; and, friends 4% and police 9% in Kansas) as deterrents. Proportional differences existed according to alcohol involvement classification. Police were seen as a greater deterrent by the alcohol involved (7% to 1% in Wichita and 12% to 4% in Kansas) with friends disapproval slightly more important as a deterrent factor for the non-alcohol involved (Wichita 5% NA/I to 3% A/I and 5% NA/I to 4% A/I in Kansas). Hence, some deterrent factors could be noted but perceived accident possibilities were the most important factor in both samples.

Action After Becoming Drunk at a Party

Respondents were asked what their action would be if: male, and driver with a date and had too much to drink; or if female, with date who was the driver, and date had too much to drink. The results are presented in Table 12. The chi square statistics for this table were computed by both sample residence and status of alcohol involvement. The data were further separated by sex, hence there are two statistics, one for males and one for females

TABLE 12

ACTION AFTER BECOMING DRUNK BY SAMPLE GROUP, ALCOHOL INVOLVEMENT AND SEX (PERCENTAGE OF RESPONDENTS)

	Wichita				Kansas			
	Alcohol Involved		Non-Alcohol Involved		Alcohol Involved		Non-Alcohol Involved	
Action	Male	Female	Male	Female	Male	Female	Male	Female
Drive Myself	20	59	8	35	24	59	9	49
Let (him-her) Drive	59	8	59	8	60	13	62	3
Get a Friend	9	26	15	33	9	22	14	31
Call Taxi	9	3	12	13	4	2	13	7
Call Parents	2	2	4	16	0	2	2	10
Hitch Hike	1	2	2	0	3	2	0	0
Total	100%	100%	100%	100%	100%	100%	100%	100%

$X^2 = 9.13$ with 5 d.f., N.S. Male
$X^2 = 24.48$ with 5 d.f., > .001 Female

The data presented in Table 12 show that general concensus existed between males and females in both sample groups. Males were willing to let their dates drive and their dates were willing to drive. Females were more willing to drive themself or to ask a friend to drive. Males seemed to rely more on their dates. The chi square result was not significant when males were examined by residence, alcohol involvement and statements of what they would do if they found they had drunk too much at a party.

Alcohol involved males in both sample groups were relatively more willing to drive themselves than their non-alcohol involved counterparts. Similarly, non-alcohol involved females were more willing to ask a friend to drive rather than allow their date to drive when leaving the party. It would seem that alcohol involved respondents in both samples felt more confident about their driving ability even after drinking too much than non-alcohol involved respondents. These results were consistent with results to the previous question regarding the influence of alcohol on driving ability. Females significantly differed in their responses as to what they would do if after driving to a party they had drunk too much. For the most part they wouldn't allow their date to drive the car.

Chances of an Accident

Students were asked to provide their perceptions of "the chances of being involved in an automobile accident, if driving after drinking too much". The findings in Table 13 show that the majority of all respondents, independent of sample group and alcohol involvement, indicated that the chances of an auto accident were high or very high if driving after drinking too much. However, the percentage of responses for both the alcohol involved and non-alcohol involved for the Wichita sample was greater than for the Kansas sample. In addition,

more non-alcohol involved respondents felt that the chances of an accident were greater than did the alcohol involved respondents in each sample group. This general response pattern is quite consistent with responses to the questions about consequences and deterrents regarding driving after drinking too much.

TABLE 13

PERCEPTION OF CHANCES OF INVOLVEMENT IN AUTO ACCIDENT AFTER DRINKING TOO MUCH BY SAMPLE GROUP AND ALCOHOL INVOLVEMENT

	Wichita					Kansas					
	Alcohol Involved			Non-Alcohol Involved		Alcohol Involved			Non-Alcohol Involved		
Chances	#	%	Σ	#	%	#	%	Σ	#	%	Σ
Very High	81	29	190	109	46	164	24	317	153	38	508
High	124	44	211	87	36	263	39	435	172	42	646
About Even	64	23	101	37	16	214	32	290	76	19	391
Low	10	3	16	6	2	27	4	32	5	1	48
Very Low	3	1	3	0	0	12	1	12	0	0	15
Total	282	100	521	239	100	680	100	1086	406	100	1607
	54%		32%	46%		63%		68%	37%		

$X^2 = 16.76$ with 4 d.f., > .01 level.

The computed chi square was significant at the .01 level indicating a difference in perceptions between the Wichita and outstate samples. The Wichita sample saw higher probabilities of being involved in an accident after drinking too much and driving. In both samples the non-alcohol involved perceived higher probabilities of accidents than was the case for the alcohol involved without regard for residence.

Discussion and Conclusions

To obtain information about the drinking/driving attitudes, behaviors and concerns of youth, a statewide survey was conducted in 1974. Respondents to the survey consisted of a proportional random sample of youth in the state based on population density of the eleven designated multi-county regions of Kansas.

Analysis of the data consisted of a comparison of responses of youth from Wichita and youth from out-state Kansas. Each sample group was further sub-divided into alcohol involved and non-alcohol involved groups for within - and between-sample comparisons. Designation of alcohol involved status was based on students' self-reported consumption of alcohol within the thirty days preceding the survey.

The Wichita and Kansas samples of respondents obtained were similar in terms of the characteristics of class standing and age but family income, and race differed significantly. In addition a larger proportion of the Kansas sample was alcohol involved compared to the Wichita sample, 63 percent to 54 percent. A notable finding for both samples was the high percentage of alcohol involved respondents compared to the percentage legally able to purchase alcohol in the state. Only about 13 percent of each sub sample was old enough to legally purchase alcohol (18 years for 3.2% beer), yet 45 percent of the Wichita sample and 52 percent of the Kansas sample below eighteen years of age were alcohol involved by definition. Alcohol involvement tended to increase with grade level in both samples and with increasing family income, however, this latter trend evened out above the $15,000 annual income category for the Kansas sample.

Data presented elsewhere, but relevant to this analysis indicate, compared to the Wichita sample, a larger percentage of the Kansas sample held a valid driver's license/permit, owned their own auto and had received three or more moving traffic citations. These same trends existed for the alcohol involved in each sample.

Thus, a larger percentage of the out-state Kansas youth and the alcohol involved youth in each sample more frequently drank alcohol, were legally able to operate an auto, owned their own auto and received traffic tickets more frequently and had more multiple or repeat violations for moving offenses.

The drinking patterns of the alcohol involved respondents in both samples were similar in that beer was the preferred alcoholic beverage and alcohol was typically consumed on one day each week. Whereas a larger percentage of the Wichita alcohol involved group drank one-to-two drinks on an average drinking day, a larger percentage of the Kansas sample drank three or more drinks. Another distinction between these two groups was that 24 percent of the Kansas alcohol involved group did most of their drinking while driving around, compared to about 10 percent of the Wichita group. A relatively large proportion of the alcohol involved in each sample also preferred to drink most often at parties which also presumably involved automobile transportation.

Higher percentages of the Kansas sample drank alcohol, drank larger amounts when they did drink, and significantly larger percentages (24% Kansas, 10% Wichita)did most of their drinking while driving around. There was a significant difference in willingness to drive after drinking with the Kansas sample more willing to drive after drinking. The Kansas sample also had driven while intoxicated more often than the Wichita group. Seven percent of the Kansas sample

ported they had done so 10 or more times at the time of the study.

There was no significant statistic relating the amount respondents were willing to drink and then drive. Most respondents felt that alcohol consumption either had no effect on their driving or, at most, made their driving ability "a little worse". Only the alcohol involved respondents felt that their driving ability was improved after consuming alcohol. More of the Kansas alcohol involved sample reported driving after drinking and driving when drunk more often than their Wichita counterparts (significant .05 level).

The great majority of all respondents considered the chances of involvement in an auto accident when driving after drinking to be high or very high and their greatest concern was the consequence of possible injury to others. Although these feelings were shared by most respondents, they were held by a greater percentage of the non-alcohol involved than alcohol involved respondents. The residence difference was not significant.

An interesting sex difference was noted in what respondents would do if they became drunk at a party. The alcohol involved males were more willing to go ahead and drive (about 23%) than the non alcohol involved males (about 9%). However, females in all classifications were more willing to drive after becoming drunk at a party (59% alcohol involved females, 45% non-alcohol involved). Conversely the males who became drunk would allow their date to drive (60%), the females generally would not (8%). There was a significant difference for females (.001 level) but the male test was not significant.

The non-alcohol involved perceived a much higher possibility of becoming involved in an auto accident than was the case for the alcohol involved. The chi square test for difference by residence was significant at the .01 level with the Wichita sample perceiving higher risks.

In summary, there were significant differences between the Wichita and the outstate respondents. Five of the eight chi square tests of behavioral and perceptual variables were significant. The Wichita sample was less likely to drink and drive, drive after drinking too much, females were less likely to drive themself after drinking too much and perceived higher probabilities of becoming involved in an auto accident after drinking too much.

Footnotes

1. Wilcox, Leslie D., et. al., Social Indicators and Societal Monitoring, An Annotated Bibliography, Jossey-Bass, Inc., Publishers, San Francisco, Ca., 1972.

2. Hansen, Morris, H., et. al., Sample Survey Methods and Theory, John Wiley and Sons, Inc., New York, N.Y., 1953.

3. Communications Strategies on Alcohol and Highway Safety, Volume II - High School Youth, February, 1975, Department of Transportation.

4. Unpublished report of the Phoenix Alcohol Safety Action Program, Phoenix, Arizona, 1974.

5. Leonard, Wilbert, M. II, Basic Social Statistics, West Publishing Co., St. Paul, Minn., 1976.